

WO 2005/015049

PCT/US2004/025504

CLAIMS

What is claimed is:

1. A switchable hydraulic bushing mount, comprising:
a housing;
5 a core disposed in said housing;
an elastomeric member bonded to an outer surface of said core and disposed in said housing, said elastomeric member combining with said housing for defining a pumping chamber and at least one compensation chamber fluidly interconnected to one another by an inertia track extending along a periphery of
10 said elastomeric member, said compensation chamber being defined by an interior wall surface of said housing and a flexible wall portion of said elastomeric member, said flexible wall portion of said compensation chamber defining a portion of a secondary chamber adjacent to said compensation chamber, said secondary chamber being air-tight and including a bleed passage communicating
15 thereto; and
a closure device operable for closing said bleed passage.
2. The switchable hydraulic bushing mount according to claim 1, wherein said at least one compensation chamber includes a pair of fluidly interconnected compensation chambers.
- 20 3. The switchable hydraulic bushing mount according to claim 1, wherein said elastomeric member includes an inner support structure including:
a first ring having an annular wall, an outer end wall and an inner end wall;
a second ring having an annular wall, an outer end wall and an
25 inner end wall; and
a plurality of legs formed between the first and second rings.
4. The switchable hydraulic bushing according to claim 3, wherein said plurality of legs of said inner support structure include a first pair of legs disposed on opposite sides of said pumping chamber.
- 30 5. The switchable hydraulic bushing according to claim 4, wherein said at least one compensation chamber includes a pair of fluidly interconnected compensation chambers and wherein said plurality of legs of said inner support structure include a leg disposed between said pair of compensation chambers.

WO 2005/015049

PCT/US2004/025504

6. The switchable hydraulic bushing according to claim 3, wherein said outer end wall and said inner end wall of said first ring are disposed on opposite sides of said inertia track.

7. The switchable hydraulic bushing according to claim 1, wherein said closure device is selectively closable.

8. The switchable hydraulic bushing according to claim 1, wherein said closure device includes an activation device for moving said closure device between an open and a closed position.

9. A switchable hydraulic bushing mount, comprising:
a housing;
a core disposed in said housing;
an elastomeric member bonded to an outer surface of said core and disposed in said housing, said elastomeric member defining a pumping chamber and at least one compensation chamber fluidly interconnected to one another by a fluid passage, said compensation chamber being defined partially by a flexible wall portion of said elastomeric member, said flexible wall portion of said compensation chamber defining a portion of a secondary chamber adjacent to said compensation chamber, said secondary chamber being air-tight and including a bleed passage communicating thereto; and
a closure device operable for closing said bleed passage.

10. The switchable hydraulic bushing mount according to claim 9, wherein said at least one compensation chamber includes a pair of fluidly interconnected compensation chambers each having a flexible wall portion.

11. The switchable hydraulic bushing mount according to claim 9, wherein said elastomeric member includes an inner support structure including:
a first ring having an annular wall, an outer end wall and an inner end wall;
a second ring having an annular wall, an outer end wall and an inner end wall; and

a plurality of legs formed between the first and second rings.

12. The switchable hydraulic bushing according to claim 11, wherein said plurality of legs of said inner support structure include a first pair of legs disposed on opposite sides of said pumping chamber.

WO 2005/015049

PCT/US2004/025504

13. The switchable hydraulic bushing according to claim 12, wherein said at least one compensation chamber includes a pair of fluidly interconnected compensation chambers and wherein said plurality of legs of said inner support structure include a leg disposed between said pair of compensation chambers.
- 5 14. The switchable hydraulic bushing according to claim 11, wherein said outer end wall and said inner end wall of said first ring are disposed on opposite sides of said inertia track.
15. The switchable hydraulic bushing according to claim 9, wherein said closure device is selectively closable.
- 10 16. The switchable hydraulic bushing according to claim 9, wherein said closure device includes an activation device for moving said closure device between an open and a closed position.